

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/590,552  
Source: IFWP  
Date Processed by STIC: 09/01/2006

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 09/01/2006

PATENT APPLICATION: US/10/590,552

TIME: 12:08:10

Input Set : F:\SEQUENCE LISTING.txt

Output Set: N:\CRF4\09012006\J590552.raw

3 <110> APPLICANT: ITO, Yoshitaka  
 4 TAKAMIZAWA, Kazuhiro  
 5 IWAHASHI, Hitoshi  
 7 <120> TITLE OF INVENTION: METHOD OF JUDGING BIOLOGICAL ACTIVITY IN BIOREMEDIATION SITE

AND

8 POLYNUCLEOTIDE FOR DETECTING MICROORGANISM TO BE USED THEREIN

10 <130> FILE REFERENCE: 10873.1940USWO

C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/590,552

13 <141> CURRENT FILING DATE: 2006-08-23

15 <150> PRIOR APPLICATION NUMBER: PCT/JP2005/003175

16 <151> PRIOR FILING DATE: 2005-02-25

19 <150> PRIOR APPLICATION NUMBER: JP application No.2004-50082

20 <151> PRIOR FILING DATE: 2004-02-25

22 <150> PRIOR APPLICATION NUMBER: JP application No.2004-50083

23 <151> PRIOR FILING DATE: 2004-02-25

25 <160> NUMBER OF SEQ ID NOS: 118

27 <170> SOFTWARE: PatentIn version 3.3

29 <210> SEQ ID NO: 1

30 <211> LENGTH: 742

31 <212> TYPE: DNA

32 <213> ORGANISM: Dehalospirillum multivorans

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39	gagagattga atgaaaaagg ggcttatagc tcaggtgggt agagcgtacc cctgataagg	180
41	gtaaggctcag aggttcgagt cctcttaagc ccaccatggg gaattagctc agctgggaga	240
43	gcgcctgctt tgcacgcagg aggtcagcgg ttcgatcccg ctattctcca ccatttttta	300
45	gagaaatggt gaaagattgc caagagacat tgtagtgag aatgaagaca caatgtctaa	360
47	tataagaaca atttagggtt tttttatatt agacttttta gtctaagttt atgttctaca	420
49	atrtagaata cgacgctttg tgttggtgctg taggtttggt tctttaagat agctttgcta	480
51	tctggtgaaa gaacataaag atgttattta atttattatt gtcaaagtca acaaaacgca	540
53	aaaaaaacaa tttacaactt gttagatggt ttacatttaa taaggagtg aaatgtgcat	600
55	tagaatacaa ataggtaagc tattaagagc gaatggtgga tgcctaggct gtaagaggcg	660
57	atgaaggacg tactagactg cgataagtta cggggagctg tcaagaagct ttgatccgta	720
59	aatttccgaa tggggcaacc ca	742

62 <210> SEQ ID NO: 2

63 <211> LENGTH: 527

64 <212> TYPE: DNA

65 <213> ORGANISM: Desulfitobacterium frappieri

67 <400> SEQUENCE: 2

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72	agatgaagtg aaacgggtca aagctggaga agtctgaaga gacttcgaaa tgccgaagag	180
74	gcaaagcagg ggaaatctgc ataagatgac cctgaaatcg agtcaaacct gttcaagcgc	240

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78 aaaagtcaag aaaaactgtt ctttgaaaac tgcacagaga agaaaaaact gtaatttagg 360
80 ataacatctg aaaaacctga atgtggcgga gacgtttggt caagctacta agggcgtagc 420
82 gtggatgcct aggcgctaag agtcgaagaa ggacgcggcg agcggcgaaa cgccacgggg 480
84 agcagtaagc atgctttgat ccgtggatat ccgaatgggg caacca 527
87 <210> SEQ ID NO: 3
88 <211> LENGTH: 478
89 <212> TYPE: DNA
90 <213> ORGANISM: Actinomycetales Sm-1
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95 aactcccgtc ggtgggtcac acaggtgact ccgccacggg cagagccatt tcggattcac 120
97 acgtaatccg gtgggtgctca tgggtggaac gctgacagct acttctcgtc cgggtcccgt 180
99 ttctgtgcgg gatccgagga gttatatcgg tgcactgttg ggtcctgaga gaacacgcga 240
101 gtgttttgtc agcgacgatg atccgcgaaa caagaggaca tggttttcctt gcggtagggg 300
103 ttgtttgtgtg ttgtttgaga actgcacagt ggacgcgagc atctttgttg taagtgttta 360
105 tgagcgtacg gtggatgcct tggcaccagg agccgatgaa ggacgtggga ggctgcgata 420
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111 <211> LENGTH: 478
112 <212> TYPE: DNA
113 <213> ORGANISM: Rhodococcus rhodococcus
115 <400> SEQUENCE: 4
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118 aactccttgc tcggaccagc acacaggtgc cgggggagcg aggcagagcc atttcggatt 120
120 cacacgtaat ccggtgggtgc tcatgggtgg aacgctgaca gtcatacccg cgcgggaagg 180
122 acccgagtgt ccttctgcgg tggttatatc ggtgcactgt tgggtcctga gagaacacgc 240
124 gagtgttttg tcagcgacga tgatcgggaa cgaaggggtt gtttcttctt ccggtaccgg 300
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128 tgagcgtacg gtggatgcct tggcaccagg agccgatgaa ggacgtggga ggctgcgata 420
130 tgcctcgggg agctgtcaac cgagctgtga tccgaggatt tccgaatggg gaaacca 478
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134 <211> LENGTH: 952
135 <212> TYPE: DNA
136 <213> ORGANISM: Xanthobacter flavus
138 <400> SEQUENCE: 5
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141 atccctcagt attgagactt cgtctctgat ctatcggatc tcttcagaaa catcagccgg 120
143 acataggtgg aaacatcatg atctggcatt ggcgggacac cgccgtcttc gtttctcttt 180
145 cttecgcgac aagcttgacg cccaggttgc ggtccttttg actgcgttcc ggtttcgggc 240
147 ctgtagctca ggtggttaga gcgacccctt gataaggggtg aggtcggacg ttcgagtcgt 300
149 cccaggccca ccaccatcag acagttcttg cctgcgcctc atgtccgaag cttecggaac 360
151 tctcgctgtg ggcatcctgt gatggggcca tagctcagtt gggagagcgc gtgctttgca 420
153 agcatgaggt cgtcggttcg atcccgctcg gctccaccat tcttcttttc ttgaggaaga 480
155 tgatggcagg gtggtttgcg ctcggtcctt ttgagtgaag gctcttgggg tcttgagcgt 540
157 cttgtcccg aatatctgtt tcgcatgttc catcatgccg gtctccggcg gaacatgcac 600
159 ggctgtatga catcgtgaat agggcattga tcgactgtac cgtggcaaca cggtcgggtc 660
161 gtggggaagg tggcgacacc ttctgatgcg atcattgggt gctgaccgca ccattgtcga 720
163 caatgcgaag ctggtctttt caaagaagac gtcgaagccg tccggccggg agcaatcctg 780

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167 attcgggtgga tgccttggcg ctaagaggcg aagaaggacg tgatacgctg cgataagctt      900
169 cggggagccg cgaatgggct ttgatccgga gatttccgaa tggggcaacc ca              952
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173 <211> LENGTH: 579
174 <212> TYPE: DNA
175 <213> ORGANISM: Mycobacterium L1
177 <400> SEQUENCE: 6
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180 ccacgagacc tggccggccc gtaaatecgc ggatcagccg attgtcaggc gattcgttgg      120
182 atggcccttt cacctgtagt ggggtgggggt ctgggtgcacg acaagcaaac gaccaggatg      180
184 gggaccttcc ttgtgggggt tgtctgggtgc tgccaaacac actgttgggc tttgagacaa      240
186 caggcccgtg cccgggtttc cgggtggctc cgcggtgggt gggtcggcgt gttgttgctt      300
188 cactttgggt gtgggggtgt gtgtttgatt tgtggatagt ggttgcgagc atctagcacg      360
190 caaatgtggc tctcgaggct ttcgggtctg ggggggtgtg ttgtgtgctt ttgatgtgca      420
192 gtttcttttt tcgaattggt tttttgtgtt gtaagtgttt aagggcgcat ggtggatgcc      480
194 ttggcactgg gagccgatga aggacgtggg aggctgcgtt atgcctcggg gagctgtcaa      540
196 ccgagcgtgg atccgaggat gtccgaatgg ggcaaccca              579
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200 <211> LENGTH: 523
201 <212> TYPE: DNA
202 <213> ORGANISM: Desulfomicrobium norvegicum
204 <400> SEQUENCE: 7
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207 ctccaactcg ctatttactt gcaaggtttc ttaccttgct ggtttagaaa tgggcttgta      120
209 gctcaggtgg ttagagcgca cgcctgataa gcgtgaggtc ggaagttcaa gtcttcccag      180
211 gcccaccatt tcttagtggg ggtgtagctc agctgggaga gcgcctgcct tgcacgcagg      240
213 aggtcatcag ttcgatcctg ttcacctcca ccattttcca actcgacaag aatttatgtt      300
215 gctagtcttt atcgtcagag tgtcttttga cactatggcg cccaagcata gcagcttggtg      360
217 atcattgaca gacgaatagg tgaagagaag agagttaaga tgtaagggc atacgggtgga      420
219 tgccttggcg tcaggaggcg atgaaggacg tggaaggctg cgataagcct cggggagccg      480
221 tcaagcaggc tttgatccgg ggatttccga atggggcaac cca              523
224 <210> SEQ ID NO: 8
225 <211> LENGTH: 662
226 <212> TYPE: DNA
227 <213> ORGANISM: Desulfitobacterium dehalogenans
229 <400> SEQUENCE: 8
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232 catggtttct cgctagagaa atcatatcct aaggtcgatg ctttgaagaa cgtcacggaa      120
234 gcaatgaagt gaaacgattc aaagtcggag aagtcttaag agacttctta taggaaactt      180
236 ggcttgtgtg aagcatgagc agaagccata gttgacttat ccacggagtg gaaaaatgcc      240
238 gaagaggcaa aacggagcaa tccgtaaagt atgggaaatg aagctgttga agttaaagc      300
240 taacttgttg tttagttttg agggaccata aagtcttcta tatgggggta tagctcagct      360
242 gggagagcac ctgccttgca agcaggggggt cagcggttcg atcccgttta cctccaccat      420
244 aatatactct gtttctctaa tgtttattat gttctttgaa aactgcacag agaagaagaa      480
246 aactgtaatt aggataacat ctaaaaccta gaagtggcgg caaaaaacgt ttggtcaagc      540
248 tactaagggc gtacgggtgga tgcctaggcg ctaagagtcg aagaaggacg cggcgagcgg      600
250 cgaaacgcca cggggagcag taagcatgcc ttgatccgtg gatatccgaa tggggcaacc      660
252 ca              662

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255 <210> SEQ ID NO: 9
256 <211> LENGTH: 775
257 <212> TYPE: DNA
258 <213> ORGANISM: Desulfitobacterium hafniense
260 <400> SEQUENCE: 9
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263 catgttcact ctggaagtga gcatatccta aggtcgaatgc tttgaaggac gtcacggaag      120
265 agatgaagtg aaacggttca aagctggaga agtctataga gacttcgaag tgccgaagag      180
267 gcaaagcagg ggaaatctgc ataagatgac cctgaagtcg agtcaaacct gttcaagcgc      240
269 aagcttactt gttgtttagt tttgagagac cataaagtct tctatgggct tatagctcag      300
271 ctgggttagag cgcacgcctg ataagcgtga ggtcgggtggt tcgagtcacc ctagggccac      360
273 cattattcaa agaggataga gacccgaacc tccaaacaat acttcacgcc agaacatacc      420
275 taacaggggt gagtattgag aggggagcgg ctccctctc aacgacatgg gggatatagct      480
277 cagctggggg agcacctgcc ttgcaagcag ggggtcagcg gttcgatccc gcttacctcc      540
279 accatcatat actggtttct ctaatgttct ttgaaaactg cacagagaag aaaaaactgt      600
281 aatttaggat aacatctgaa aaacctgaat gtggcggaga cggttggtca agctactaag      660
283 ggcgtacggt ggatgcctag gcgctaagag tcgaagaagg acgcggcgag cggcgaaacg      720
285 ccacggggag cagtaagcat gccttgatcc gtggatatcc gaatggggca accca      775
288 <210> SEQ ID NO: 10
289 <211> LENGTH: 422
290 <212> TYPE: DNA
291 <213> ORGANISM: Clostridium formicoaceticum
293 <400> SEQUENCE: 10
294 aagtcgtaac aaggtagccg tatcgggaagg tgcggctgga tcacctcctt tctaaggaga      60
296 aaggctttta ctatactgtt taattttgag ggacttttgt ttctcaataa gcagacaacc      120
298 aaaatcttag attttgtgtt agtcgcttag ttaaaaattc tgtaattcac gacaatagtt      180
300 ttaaaccaac aaaaaatgaa tggaagaatt tttaacatct atagtctttt agattgttct      240
302 ttgaaaacta aacaatgata tgagaaaaga aaagctgaag taattcacta aaggtcaagt      300
304 tattaagggc aaaggggtgga tgccttggca ctaggagccg aagaaggacg tggttaagctg      360
306 cgaaaagcca cggggagctg caagcaagta ttgatccgtg gatgtccgaa tggggaaacc      420
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311 <210> SEQ ID NO: 11
312 <211> LENGTH: 699
313 <212> TYPE: DNA
314 <213> ORGANISM: Desulfuromonas chloroethenica
316 <400> SEQUENCE: 11
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343 <211> LENGTH: 391
344 <212> TYPE: DNA
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352 agaaggcatc ttaggatgca ttttttaacg ggacaaatac cggagtagtg gtagcaggtc      180
354 ccaatcgatc attgaaaaca gcatagtgtg taaataaaat tataaaatac aattttcttaa      240
356 cacgaaaacg taaattatta ggatcaagaa gaaaagagca caggggtgaat gccttggcaa      300
358 tcagagccga cgaaggacgc gacaagctgc gaaaagctac gtgtaggtgc acataaccgt      360
360 taaagcgtag atatccgaat ggggcaaccc a                                391
363 <210> SEQ ID NO: 13
364 <211> LENGTH: 608
365 <212> TYPE: DNA
366 <213> ORGANISM: Dehalobacter restrictus
368 <400> SEQUENCE: 13
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373 actggactga ctctcaagta aggtgagttt agcaatttat ttcttggtgt ttagttttga      180
375 gtgacctgag cacagtaatg tgtaaaagaa acactcaaat aatgtccata catatcagag      240
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381 taacgttttc gcgcgtggca aatttgaact taggagcatc tatgtccgt caggtaagaa      420
383 ttactaagcg cataggagac attcaaatca tctataacaa gtcgaggaag aaccagaagg      480
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387 taacagcgaa atgccacggg gagtcgtaag caggcataga tccgtggatg tccgaatggg      600
389 gaaaccca                                608
392 <210> SEQ ID NO: 14
393 <211> LENGTH: 689
394 <212> TYPE: DNA
395 <213> ORGANISM: Desulfitobacterium sp. strain PCE1
397 <400> SEQUENCE: 14
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402 gcaatgaagt gaaacgattc aaagttggag aagtcttaag agacttctga aagccgaaga      180
404 ggcaaaacgg agcaatccgt aaagtatgag aaatgaagct gttgaagtta aaagctaact      240
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412 cggttcgacc ccgcttacct ccaccataat atatctgggt tctctaattg ttattatggt      480
414 ctttgaaaac tgcacagaga agaagaaaac tgtaattagg ataacatcta aaacctagaa      540
416 gtggcggcaa aaaacgtttg gtcaagctac taaggcgta cgggtgatgc ctaggcgcta      600
418 agagtcgaag aaggacgcgg cgagcggcga aacgccacgg ggagcagtaa gcatgccttg      660
420 atccgtgat atccgaatgg ggcaaccca                                689
423 <210> SEQ ID NO: 15
424 <211> LENGTH: 468
425 <212> TYPE: DNA
426 <213> ORGANISM: Desulfitobacterium frappieri TCE1
428 <400> SEQUENCE: 15

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RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 09/01/2006  
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Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:116,117,118

**VERIFICATION SUMMARY**

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L:12 M:270 C: Current Application Number differs, Replaced Current Application Number